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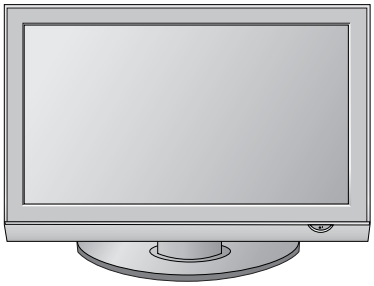
LG

PLASMA TV
SERVICE MANUAL

CHASSIS : PD83A

MODEL : 42PG1000 42PG1000-ZA

CAUTION
BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



CONTENTS

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SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by ⚠ in the Schematic Diagram and Replacement Parts List.
It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent X-RADIATION, Shock, Fire, or other Hazards.
Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer should always be used** during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and it's components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this monitor is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

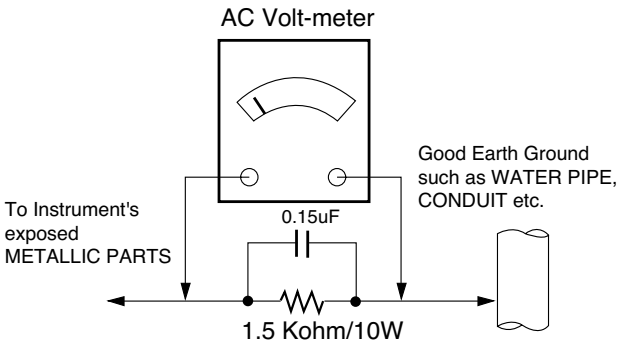
Keep wires away from high voltage or high temperature parts.

Due to high vacuum and large surface area of picture tube, extreme care should be used in **handling the Picture Tube.**
Do not lift the Picture tube by it's Neck.

Leakage Current Cold Check(Antenna Cold Check)
With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.
If the exposed metallic part has a return path to the chassis, the measured resistance should be between 1MΩ and 5.2MΩ.
When the exposed metal has no return path to the chassis the reading must be infinite.
An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)
Plug the AC cord directly into the AC outlet.
Do not use a line Isolation Transformer during this check.
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.
Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.
Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which is corresponds to 0.5mA.
In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



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SPECIFICATIONS

NOTE : Specifications and others are subject to change without notice for improvement.

■ Application Range

This spec is applied to the 42" PLASMA TV used PD83A Chassis.

Chassis	Model Name	Market	Brand	Remark
PD83A	42PG1000	Austria,Belgium,Bulgaria,Coratia,Czech,Denmark,Finland, France,Germany,Greece,Hungary,Italy,Luxembourg, Netherlands,Norway,Poland,Portugal,Rumania,Russia,Serbia,Slovenia,Spain,Sweden,Switzerland,UK	LG	

■ Specification

Each part is tested as below without special appointment.

1) Temperature : 25±5°C (77±9°F), CST : 40±5
2) Relative Humidity: 65±10%
3) Power Voltage: Standard Input voltage (100-240V~, 50/60Hz)
   * Standard Voltage of each product is marked by models.
4) Specification and performance of each parts are followed each drawing and specification by part number in accordance with SBOM.
5) The receiver must be operated for about 20 minutes prior to the adjustment.

■ Test Method

1) Performance : LGE TV test method followed.
2) Demanded other specification
   Safety : CE, IEC specification
   EMC : CE, IEC

Model	Market	Appliance	Remark
42PG1000-ZA	Austria,Belgium,Bulgaria,Coratia,Czech,Denmark,Finland ,France,Germany,Greece,Hungary,Italy,Luxembourg, Netherlands,Norway,Poland,Portugal,Rumania,Russia, Serbia,Slovenia,Spain,Sweden,Switzerland,UK	Safety : IEC/EN60065 EMI : EN55013 EMS : EN55020	

■ General Specification (42"XGA)

No	Item	Specification	Remark
1	Display Screen Device	42" Wide Color Display Module	Plasma Display Panel
2	Aspect Ratio	16:9	
3	PDP Module	PDP42XG, RGB Closed Type, Film Filter	
4	Operating Environment	1)Temp. : 0~40deg 2)Humidity : 20~80%	LGE SPEC.
5	Storage Environment	3)Temp. : -20~60deg 4)Humidity : 10~90%	
6	Input Voltage	100-240V~, 50/60Hz	Maker : LG

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■ Module Specification2

No	Item	Specification	Remark
1	Market	Austria,Belgium,Bulgaria,Coratia,Czech,Denmark,Finland ,France,Germany,Greece,Hungary,Italy,Luxembourg, Netherlands,Norway,Poland,Portugal,Rumania,Russia, Serbia,Slovenia,Spain,Sweden,Switzerland,UK	Analog Only
2	roadcasting system	1) PAL-BG 2) PAL-DK 3) PAL I, I' 4) DVB T(ID TV) 5) SECAM L/L'	EU(PAL Marker)
3	Receiving system	Analog : Upper Heterodyne Digital : COFDM	
4	Scart Jack(2EA) Video Input (1EA) S-Video Input (1EA) Component Input (1EA)	PAL, SECAM PAL, SECAM, NTSC PAL, SECAM, NTSC Y/Cb/Cr, Y/Pb/Pr	 4 System : PAL, SECAM,NTSC,PAL60 4 System : PAL, SECAM,NTSC,PAL60
5 6 7	RGB Input HDMI Input(3EA) Audio Input (3EA)	RGB-PC HDMI-DTV & SOUND PC Audio, Component, AV	

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ADJUSTMENT INSTRUCTION

1. Application Object

These instructions are applied all of the 42" PLASMA TV, PD83A Chassis.

2. Note

(1) Because this is not a hot chassis, it is not necessary to use an isolation transformer. However, the use of isolation transformer will help protect test instrument.
(2) Adjustment must be done in the correct order.
(3) The adjustment must be performed in the circumstance of 25±5°C of temperature and 65±10% of relative humidity if there is no specific designation.
(4) The input voltage of the receiver must keep 100-240V~, 50/60Hz.
(5) The receiver must be operated for about 15 minutes prior to the adjustment.
In case of keeping module is in the circumstance of 0°C, it should be placed in the circumstance of above 15°C for 2hours.
In case of keeping module is in the circumstance of below -20°C, it should be placed in the circumstance of above 15°C for 3hours.

● After RGB Full white HEAT-RUN Mode, the receiver must be operated prior to adjustment.
● Enter into HEAT-RUN MODE
1) Press the POWER ON KEY on R/C for adjustment.
2) OSD display and screen display PATTERN MODE.

* Set is activated HEAT-RUN without signal generator in this mode.
* Single color pattern(RED/BLUE/GREEN) of HEAT-RUN mode uses to check PANEL.

If you turn on a still screen more than 20 minutes, (Especially digital pattern, cross hatch pattern) after image may be occur in the black level part of the screen.

3. ADC Calibration

* Using 'power on' button off the control R/C, power on TV.

■ Auto adjustment Map(RS-232C)

NO	Item	CMD1	CMD2	Data 0		Remark
ADC adjust	ADC adjust	A	D	1	0	
Data Read	ADC Parameter	A	D	2	0	Transfer 18Byte
	Digital Data	A	D	3	0	(Input resolution Data)
Default Write	ADC Parameter (Average)	A	D	4	0	
	Adjustment Confirmation	A	D	9	9	To check ADC Adjustment on Assembly line
Enter Adjust Mode	Adjust Mode In	A	D	0	0	When transfer the 'Mode In', Carry the command.
	Adjust Mode Out	A	D	9	0	

- Baud : 115200bps, RS232 Host : PC, Echo : none.

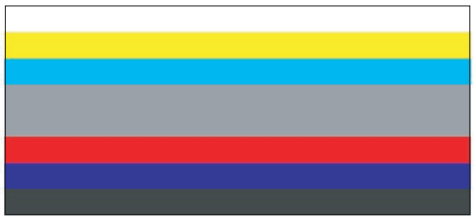
4. ADC adjustment

ADC	Component	RGB-PC
MSPG925FS	Model : 209(480i 60Hz) 223(1080i 60Hz) Pattern : 65	Model : 60 (1024*768 60Hz) Pattern : 65

5. Adjustment of RGB

5-1. Auto RGB Gain / Offset Adjustment

(1) Convert to PC in Input-source(refer to I2C command at page 10)
(2) Signal equipment displays
Output Voltage : **700** mVp-p
Impress Resolution **XGA**(1024x768@60Hz)
Model : 60 in pattern Generator
Pattern : 65 in pattern Generator(MSPG-925 Series)
[gray pattern that left & right is black and center is white signal(Refer below picture)].



(Fig.1)

(3) Adjust by commanding AUTO_COLOR_ADJUST.

5-2. Confirmation

(1) We confirm whether **"0xAA(RGB)" address of EEPROM "0xA2"** is "0xAA" or not.
(2) If **"0xAA(RGB)"** address of EEPROM "0xA2" isn't "0xAA", we adjust once more.
(3) We can confirm the ADC values from **"0xA4~0xA9(RGB)"** address in a page **"0xA2"**.

* **Manual ADC process** using Service Remocon. After enter Service Mode by pushing "ADJ" key, execute "ADC Adjust" by pushing "▶" key at "ADC CALIBRATION : RGB-C".

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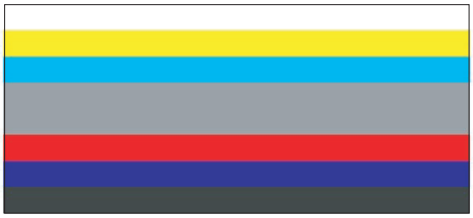
6. Component input ADC

6-1. Component Gain/Offset Adjustment

(1) Convert to PC in Input-source(refer to I2C command at page 10)
(2) Signal equipment displays
  1) Impress Resolution **480i**
    Model : 209 in pattern Generator(480i Mode)
    Pattern : 65 in pattern Generator(MSPG-925 Series)
  2) Impress Resolution **1080i**
    Model : 223 in pattern Generator(1080i Mode)
    Pattern : 65 in pattern Generator(MSPG-925 Series)



(Fig.2)

6-2. Confirmation

(1) We confirm whether **"0xB3(480i)/0xBC(1080i)" address of EEPROM "0xA2"** is "0xAA" or not.
(2) If **"0xB3(480i)/0xBC(1080i)"** address of EEPROM "0xA2" isn't "0xAA", we adjust once more.
(3) We can confirm the ADC values from **"0xAD~0xB2(480i)/0xB6~BB(1080i)"** address in a page "0xA2".

* Manual ADC process using Service Remocon. After enter Service Mode by pushing "ADJ" key, execute "ADC Adjust" by pushing "▶" key at "ADC CALIBRATION : RGB-C".

Each PCB assembly must be checked by check JIG set. (Because power PCB Assembly damages to PDP Module, especially be careful)

7. POWER PCB Assy Voltage Adjustments (Va, Vs Voltage adjustments)

7-1. Test Equipment : D.M.M. 1EA

7-2.Connection Diagram for Measuring

: refer to Fig.3

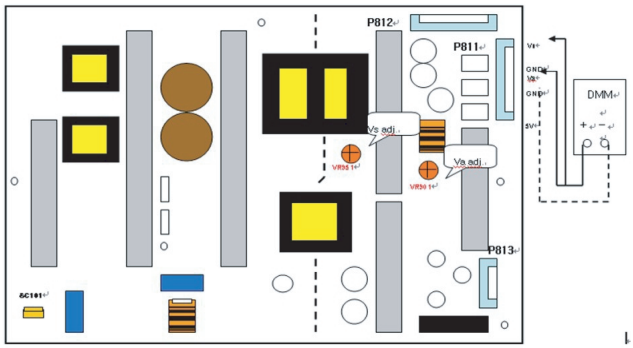
7-3. Adjustment Method

(1) Va Adjustment

1) After receiving 100% Full White Pattern, HEAT RUN.
2) Connect + terminal of D.M.M to Va pin of P811, connect - terminal to GND pin of P811.
3) After turning VR901, voltage of D.M.M adjustment as same as Va voltage which on label of panel right/top. (Deviation; ±0.5V)

(2) Vs Adjustment

1) Input signal : RF noise signal.
2) Connect + terminal of D.M.M to Vs pin of P811, connect – terminal to GND pin of P811.
3) After turning VR951, voltage of D.M.M adjustment as same as Va voltage which on label of panel right/top. (Deviation; ±0.5V)



(Fig.3) Connection diagram of power adjustment for measuring

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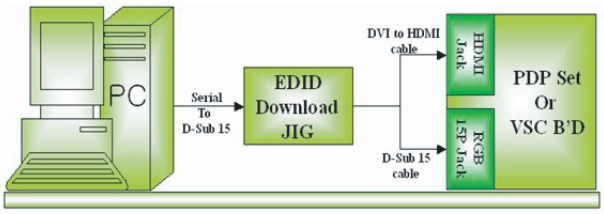
8. EDID(The Extended Display Identification Data) /DDC(Display Data Channel) download

8-1. Required Test Equipment

(1) Adjusting PC with S/W for writing EDID Data.
(S/W : EDID TESTER Ver.2.5)
(2) A Jig for EDID Download.
(3) Cable : Serial(9Pin or USB) to D-sub 15Pin cable, D-sub 15Pin cable, DVI to HDMI cable.

8-2. Required Test Equipment



(Fig.5) Connection Diagram of DDC download

8-3. Preparation for Adjustment

(1) Connect the Set, EDID Download Jig, PC & Cable.
(2) Turn on the PC & EDID Download Jig. Set up the S/W option.
(3) Power on the Set.

8-4. Sequence of Adjustment

(1) EDID Download
1) Init the data.
2) Load the EDID data.(Open File).
[Analog file] (for RGB)]
[Digital file] (for HDMI)
3) Set the S/W as below.
4) Push the “Write Data & Verify”button. And confirm “Yes”.
5) If the writing is finished, you will see the “OK” message.
6) If TV has three HDMI INPUT, you must download three times for each HDMI.

8-5. EDID DATA

1) Analog-RGB.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	[1]			[2]		
10	[3]		01	03	01	46	27	78	EA	D9	B0	A3	57	49	9C	25
20	11	49	4B	A1	08	00	31	40	45	40	61	40	D1	C0	01	01
30	01	01	01	01	01	01	1B	21	50	A0	51	00	1E	30	48	48
40	35	00	BC	86	21	00	00	1C	1A	36	80	A0	70	38	1F	40
50	30	20	35	00	99	E6	10	00	00	1C	00	00	00	FD	00	39
60	4B	1F	54	12	00	0A	20	20	20	20	20	20				
70	[4]														00	[5]

=> Detail EDID Options are below([1],[2],[3],[4],[5])

1.[1]-Product ID

Model Name	Product ID	Product ID	
		Hex	EDID table
42PG1000	40307	9D73	739D

2. [2]-Serial No : Controlled on production line.
3. [3]-Month, Year : Controlled on production line.
ex) Monthly: '03' => '03'
Year : '2006' => '10'
4. [4]-Model Name : model name.
5. [5]-Checksum -> Changeable by total EDID data.

Model Name	Model Name(Hex)
42PG1000	00 00 00 FC 00 34 32 50 7 31 30 30 30 0A 20 20 20 20

2) HDMI_1.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	[1]			[2]		
10	[3]		01	03	80	46	27	78	EA	D9	B0	A3	57	49	9C	25
20	11	49	4B	A1	08	00	31	40	45	40	61	40	D1	C0	01	01
30	01	01	01	01	01	01	1A	36	80	A0	70	38	1F	40	30	20
40	35	00	E8	26	32	00	00	1A	1B	21	50	A0	51	00	1E	30
50	48	88	35	00	BC	86	21	00	00	1C	00	00	00	FD	00	39
60	4B	1F	54	12	00	0A	20	20	20	20	20	20				
70	[4]														01	[5]

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	02	03	23	F1	4E	81	02	03	15	12	13	04	14	05	20	00
10	22	1F	10	23	09	07	07	83	01	00	00	67	03	0C	00	10
20	00	B8	2D	01	1D	00	80	51	D0	1C	20	40	80	35	00	BC
30	88	21	00	00	1E	8C	0A	D0	8A	20	E0	2D	10	10	3E	96
40	00	13	8E	21	00	00	18	02	3A	80	18	71	38	2D	40	58
50	2C	45	00	06	44	21	00	00	1E	01	1D	80	18	71	1C	16
60	20	58	2C	25	00	C4	8E	21	00	00	9E	4E	1F	00	80	51
70	00	1E	30	40	80	37	00	BC	88	21	00	00	18	00	00	[5]

=> Detail EDID Options are below([1],[2],[3],[4],[5])

1.[1]-Product ID

Model Name	Product ID	Product ID	
		Hex	EDID table
42PG1000	40308	9D74	749D

2. [2]-Serial No : Controlled on production line.
3. [3]-Month, Year : Controlled on production line.
ex) Monthly: '03' => '03'
Year : '2006' => '10'
4. [4]-Model Name : model name.

Model Name	Model Name(Hex)
42PG1000	00 00 00 FC 00 34 32 50 47 31 30 30 30 0A 20 20 20 20

5. [5]-Checksum -> Changeable by total EDID data

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2) HDMI_2.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	[1]			[2]		
10	[3]		01	03	80	46	27	78	EA	D9	B0	A3	57	49	9C	25
20	11	49	4B	A1	08	00	31	40	45	40	61	40	D1	C0	01	01
30	01	01	01	01	01	01	1A	36	80	A0	70	38	1F	40	30	20
40	35	00	E8	26	32	00	00	1A	1B	21	50	A0	51	00	1E	30
50	48	88	35	00	BC	86	21	00	00	1C	00	00	00	FD	00	39
60	4B	1F	54	12	00	0A	20	20	20	20	20	20				
70						[4]									01	[5]

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	02	03	23	F1	4E	81	02	03	15	12	13	04	14	05	20	00
10	22	1F	10	23	09	07	07	83	01	00	00	67	03	0C	00	2D
20	00	B8	2D	01	1D	00	80	51	D0	1C	20	40	80	35	00	BC
30	88	21	00	00	1E	8C	0A	D0	8A	20	E0	2D	10	10	3E	96
40	00	13	8E	21	00	00	18	02	3A	80	18	71	38	2D	40	58
50	2C	45	00	06	44	21	00	00	1E	01	1D	80	18	71	1C	16
60	20	58	2C	25	00	C4	8E	21	00	00	9E	4E	1F	00	80	51
70	00	1E	30	40	80	37	00	BC	88	21	00	00	18	00	00	[5]

=> Detail EDID Options are below([1],[2],[3],[4],[5])
* Please refer HDMI_1.

3) HDMI_3.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	[1]			[2]		
10	[3]		01	03	80	46	27	78	EA	D9	B0	A3	57	49	9C	25
20	11	49	4B	A1	08	00	31	40	45	40	61	40	D1	C0	01	01
30	01	01	01	01	01	01	1A	36	80	A0	70	38	1F	40	30	20
40	35	00	E8	26	32	00	00	1A	1B	21	50	A0	51	00	1E	30
50	48	88	35	00	BC	86	21	00	00	1C	00	00	00	FD	00	39
60	4B	1F	54	12	00	0A	20	20	20	20	20	20				
70						[4]									01	[5]

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	02	03	23	F1	4E	81	02	03	15	12	13	04	14	05	20	00
10	22	1F	10	23	09	07	07	83	01	00	00	67	03	0C	00	30
20	00	B8	2D	01	1D	00	80	51	D0	1C	20	40	80	35	00	BC
30	88	21	00	00	1E	8C	0A	D0	8A	20	E0	2D	10	10	3E	96
40	00	13	8E	21	00	00	18	02	3A	80	18	71	38	2D	40	58
50	2C	45	00	06	44	21	00	00	1E	01	1D	80	18	71	1C	16
60	20	58	2C	25	00	C4	8E	21	00	00	9E	4E	1F	00	80	51
70	00	1E	30	40	80	37	00	BC	88	21	00	00	18	00	00	[5]

=> Detail EDID Options are below([1],[2],[3],[4],[5])
* Please refer HDMI_1.

* Before adjusting White-balance, the AV ADC should be done.
If ADC status were “NG”, Need to ADC adjustment.

9. Adjustment of White Balance

9-1. Required Equipment

(1) Remote control for adjustment.
(2) Color Analyzer : CS-1000, CA-100,100+, CA210 or same product.: CH 10
* Please adjust CA-210+, CA-100+ by before measuring.
(3) Auto W/B adjustment instrument.(only for Auto adjustment)
(4) AV Pattern Generator.
(5) 15Pin D-Sub Jack(RGB) is connected to the AUTO W/B EQUIPMENT.

9-2. AUTO White Balance Process

- Adjust Process will start by execute I2C Command(Inner pattern (0xF3, 0xFF)).

◆ Color temperature standards according to CSM and Module.

CSM	PLASMA	Remark
Cool	11000K	
Normal	9300K	
Warm	6500K	

◆ CS-1000/CA-100+/CA-210(CH 10) White balance adjustment coordinate and color temperature.

CSM	Color Coordinate		Temp	△uv
	x	y		
COOL	0.276	0.283	11,000K	0.000
MEDIUM	0.285	0.293	9,300K	0.000
WARM	0.313	0.329	6,500K	0.003

9-3. Manual W/B process (using adjusts Remote control)

(1) After enter Service Mode by pushing “ADJ” key.
(2) Enter White Pattern off of service mode, and change off -> on.
(3) Enter “W/B ADJUST” by pushing “▶” key at “3. W/B ADJUST”.

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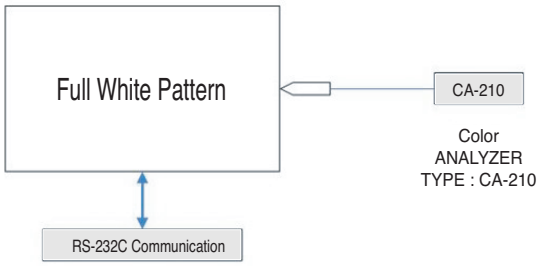
9-4. Connection Picture of the Measuring Instrument(On Automatic control)

(1) Inside PATTERN is used when W/B is controlled. Connect to auto controller or push control R/C IN-START -> Enter the mode of White-Balance, the pattern will come out.



(Fig.6) Auto AV(CVBS) Color Balance Test Pattern

9-5. Auto-control interface and directions

(1) Adjust in the place where the influx of light like floodlight around is blocked.(illumination is less than 10ux)
(2) Measure and adjust after sticking the Color Analyzer(CA-100+, CA210) to the side of the module.
(3) Aging time
- After aging start, keep the power on(no suspension of power supply) and heat-run over 15minutes.
- keep white pattern using inside pattern.

■ Auto adjustment Map(I2C)

- I2C(100K BPS)

10. Communication START

START		6E		A		STOP		50Ms

* Until ACK BIT goes LOW, Repeat it.

11. Command form

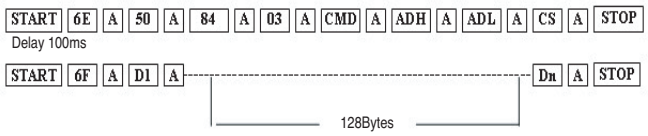
■ Command form use DDC2AB standard communication protocol.

START	6E	A	50	A	LEN	A	03	A	CMD	A	00	A	VAL	A	CS	A	STOP

1. LEN : DATA BYTE number to send.
2. CMD : Command language that monitor executes.
3. VAL : FOS DATA
4. CS : Dada's CHECKSUM that transmit.
5. DELAY : 50MS
6. A : Acknowledge.

12. EEPROM DATA READ

12-1. Single TABLE



12-2. Command Set

No.	Adjustment contents	CMD (hex)	ADH (hex)	ADL (hex)	Details		
1	EEPROM READ	E7	A0	0	0-page	0~7F	Read
2				80	0-page	80~7F	Read
3			A2	0	1-page	0~7F	Read
4				80	1-page	80~7F	Read
5			A4	0	2-page	0~7F	Read
6				80	2-page	80~7F	Read
7			A6	0	3-page	0~7F	Read
8				80	3-page	80~7F	Read

* To read the appointment Address of E²PROM by 128(80h)-byte

13. EEPROM Data Write(Serial No D/L)

13-1. Signal TABLE

CMD	LENGTH	ADH	ADL	DATA_1	...	DATA_n	CS	DELAY

CMD : 8Eh
LENGTH : 84h+bytes
ADH : E²PROM Slave Address(A0,A2,A4,A6,A8)
Not 00h(Reserved by Buffer To EEPROM)
ADL : E²PROM Sub Address low (00~FF)
Data : Write data
CS : CMD + LENGTH + ADH + ADL + Data_1 + ... + Data_n

13-2. Command Set

No	Adjust mode	CMD(hex)	LENGTH(hex)	Description
1	EEPROM WRITE	E8	94	16-Byte Write
2			84+n	n-Byte Write

* Description
FOS Default write : <7mode data> write
Vtotal, V_Frequency, Sync_Polarity, Htotal, Hstart, Vstart, 0, Phase
Data write : Model Name and Serial Number write in EEPROM,.

13-3. Method & Notice

(1) Serial number D/L is using of scan equipment.
(2) Setting of scan equipment operated by Manufacturing Technology Group.
(3) Serial number D/L must be conformed when it is produced in production line, because serial number D/L is mandatory by D-book 4.0.

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14. Adjustment Command(LENGTH=84)

No	Adjustment Contents	CMD(hex)	ADR	VAL[HEX]	Description
1	FACTORY ON	E0	00	00	Factory mode on
2	FACTORY OFF	E2	00	00	Factory mode off
3	EEPROM ALL INIT.	E4	00	00	EEPROM All clear
4	EEPROM Read	E7	00	00	EEPROM Read
5	EEPROM Write	E8	00	data	EEPROM Write by some values
6	COLOR SAVE (R/G/B cutoff, Drive, Contrast, Bright)	EB	00	00	Color Save
7	H POSITION	20	00	00 - 64	They have different range each mode, FOS Adjustment
8	V POSITION	30	00	00 - 64	
9	CLOCK	90	00	00 - 64	
10	PHASE	92	00	00 - 64	
11	R DRIVE	16 18 1A	00 : cool 01: medium 02 : warm	00 - 80	Drive adjustment
12	G DRIVE	80 82 84	00 : cool 01 : medium 02 : warm	00 - 80	
13	B DRIVE	10 12 F1	00 :cool 01: medium 02: warm	00 - 80	
14	R CUTOFF	F2	00	00 - 7F	Offset adjustment
15	G CUTOFF	F3	00	00 - 7F	
16	B CUTOFF	F4	00	00 - 7F	
17	BRIGHT		00	00 - 3F	Bright adjustment
18	CONTRAST		00	00 - 64	Luminance adjustment
19	AUTO_COLOR_ADJUST		00	02	Auto COLOR Adjustment
20	CHANGE_COLOR_TEMP		00 00 00	0,1,2,3	0 : Cool 1 : Medium 2 : Warm 3 : User
21	White Pattern			00,FF	00: White pattern off FF: White pattern on
22	AUTO_INPUT CHANGE			0,10,20,30, 40,60,90	0 : TV 10 : DTV 20 : SCART1 30 : SCART2 40 : Component 60 : RGB 90 : HDMI

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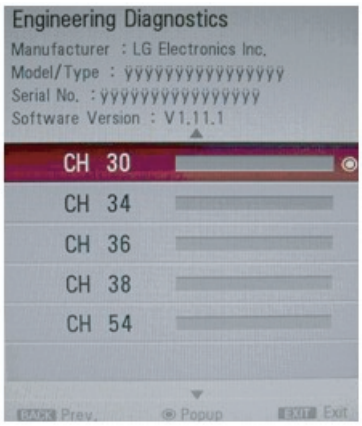
15. Set Information(Serial No & Model name)

15-1. Check the serial number & Model name

(1) Push the menu button in DTV mode.
- Select the STATION-> Diagnostics -> To set.

(2) Check the Serial Number.



16. SET factoring condition

(1) This adjustment is setting factory shipment mode.
(2) Push the IN-STOP key of adjustment remote controller before the factory shipment.

No	Item		Condition	Remark	
1	Power		Off		
2	Volume Level		15		
3	Main Picture Input		Antenna	DTV&ATV	
4	Main Last Channel		N.A.		
5	Mute		Off		
6	ARC		16:9		
7	SETUP (DTV&ATV)	Auto Tuning			
		Manual Tuning			
		Programme Set			
		Booster	ON		
		Software Update	OFF		
		Diagnostics	Engineering Diagnostics		
		CI Information			
8	PICTURE	Aspect Ratio	16:9		
		Picture Mode	Vivid	100	
			Contrast	50	
			Brightness	60	
			Color	50	
			Sharpness	0	
			Tint	Color Temp.	Medium
			Advanced Control	Fresh Con.	On
				Fresh col.	On
				Noise	On
				Reduction	
				Film (3:2)	Off
				Black level	
			Picture reset		
9	AUDIO	Auto Volume	Off		
		Balance	0		
		Sound Mode	Standard	120Hz	50
				200Hz	50
				500Hz	50
				1.2Khz	50
				3Khz	50
				7.5Khz	50
				12Khz	50
10	Time	Clock	-- : --	User control	
		Off time	Off		
		On time	Off		
		Sleep Timer	Off		
		Auto Sleep	Off		
		Time zone			
11	OPTION	Menu Language			
		Audio Language			
		Subtitle Language			
		Hard of hearing	Off		
		Country			
		Input label			
		KeyLock	Off		
		Set ID	1		
		Factory Reset	Off		
12	LOCK	Lock System	Off		
		Set Password	New * * * *		
			Confirm * * * *		
		Block Program	TV/DTV/Radio		
		Parental Guidance	Off		

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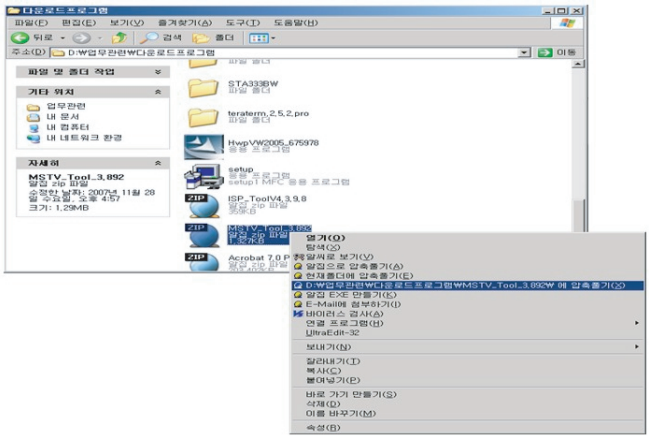
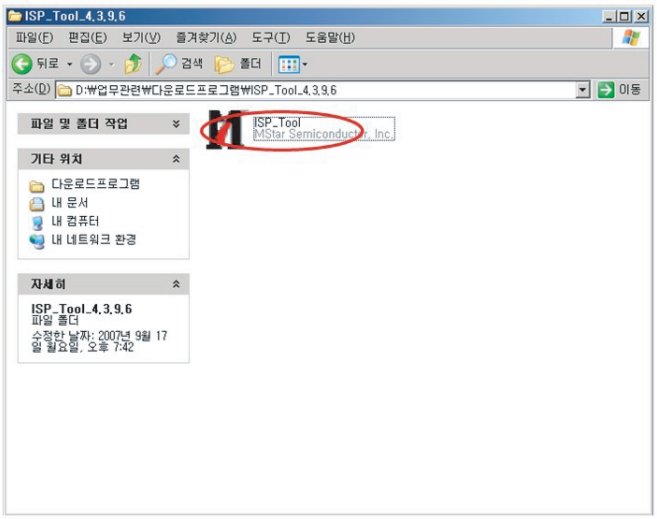
17. SW DOWNLOAD By D-SUB

17-1. Installation of MSTV

(1) Extract to folder ISP_Tool.ZIP

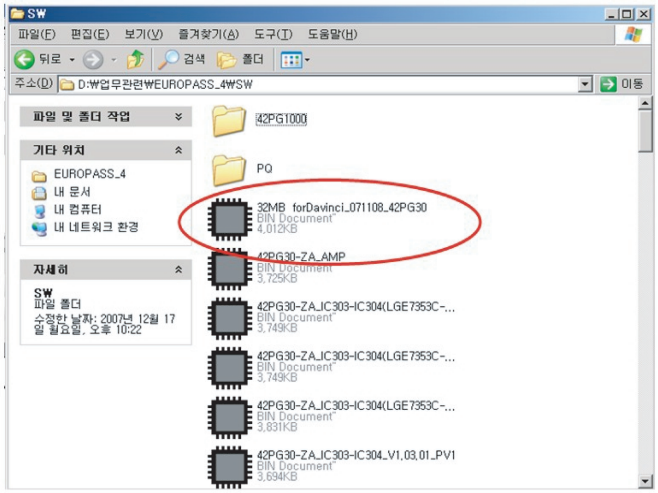


(2) Install ISP_TOOL
You can find the ICON.



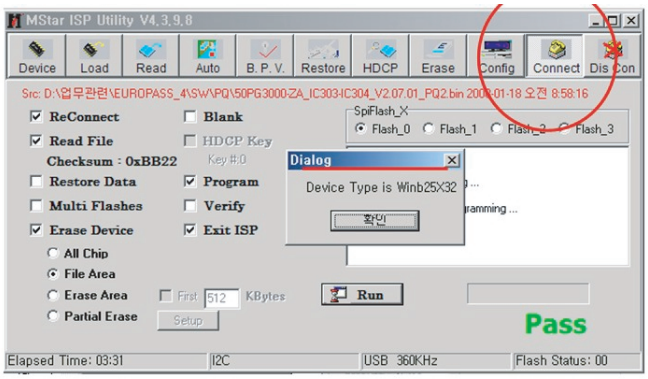
17-2. Download bin file

(1) Prepare a Binary File(*.bin)
Connect RGB cable and turn on the power.



(2) Execute ISP Program
Click the Icon.

(3) Click “Connect” Button, and check the below message.
(If display “Can’t ”, Check connect computer, jig, and set.)



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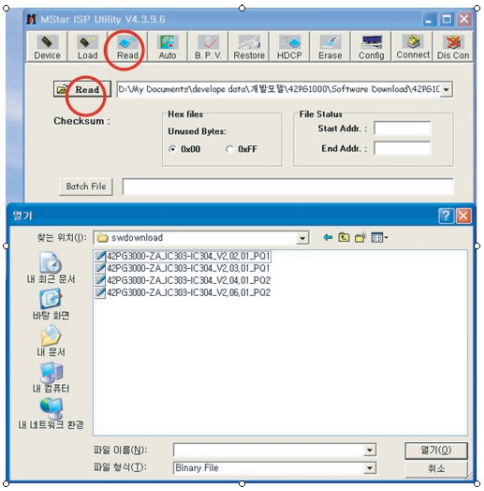
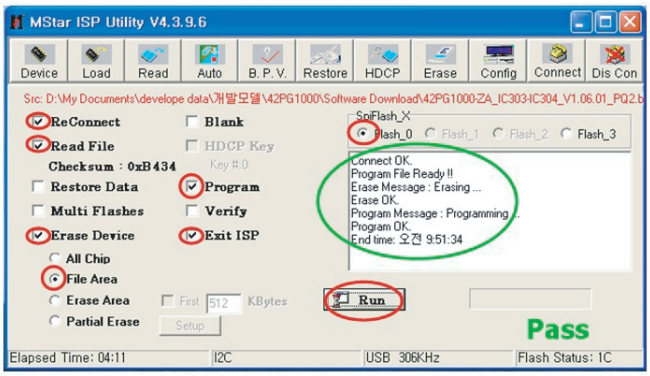
(4) Click “Read” tab, and then load download file(XXXX.bin) by clicking “Read”



(5) Click “Auto” Button, select the check box, and then Click “Run” Button.



(6) After downloading, check “OK” message.

(7) Updating Completed, The TV will restart automatically.
After turn on TV, Please press ‘IN-STOP’ button on ADJ Remote-control.
* IF you don’t have ADJ R/C, enter ‘Factory Reset’ in OPTION MENU.

(8) When TV turn on, check the **Updated version** on Diagnostics MENU.

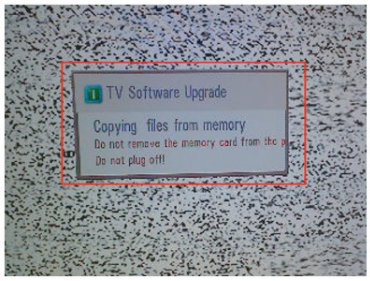
2. USB DOWNLOAD

- Put a *.bin to USB Stick and Turn on TV

(1) Put the USB Stick to the USB socket

(2) Automatically detecting update file in USB Stick
* If your downloaded program version in USB Stick is Low, it didn’t work.
But your downloaded version is High, USB data is automatically detecting.

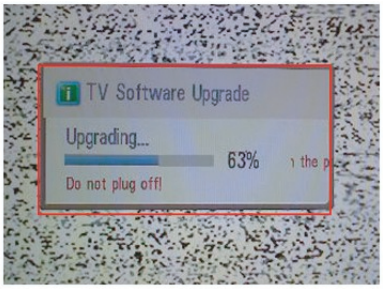
(3) Show the message “Copying files from memory”

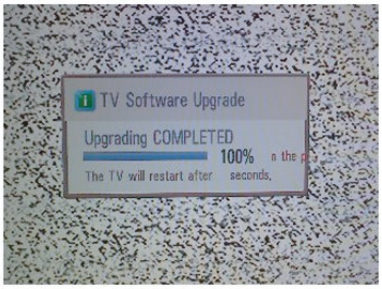


(4) Updating is staring.

(5) Updating Completed, The TV will restart automatically.
After turn on TV, Please press ‘IN-STOP’ button on ADJ Remote-control.
*IF you don’t have ADJ R/C, enter ‘Factory Reset’ in OPTION MENU.

(6) When TV turn on, check the Updated version on Diagnostics MENU.





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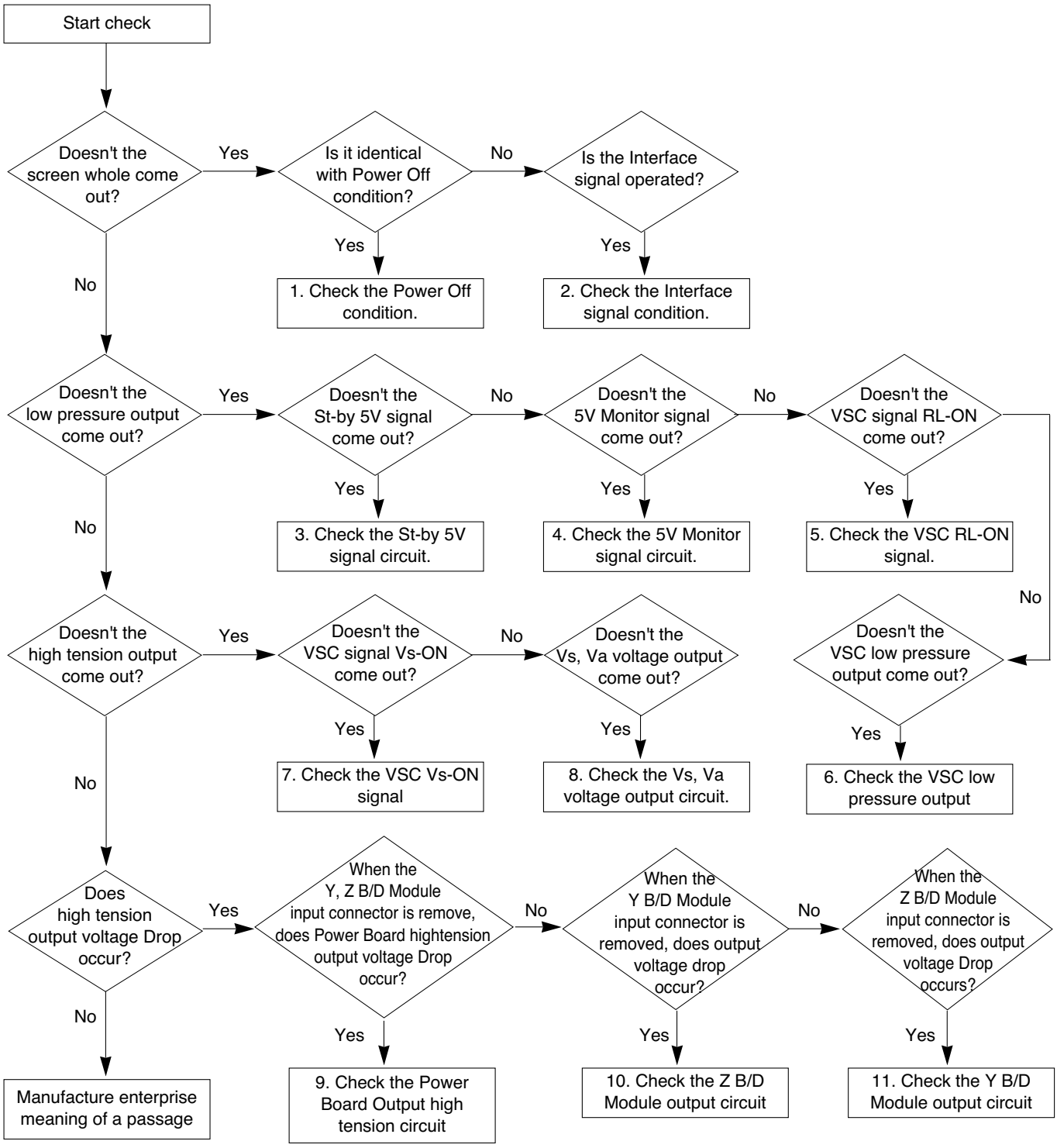
TROUBLE SHOOTING GUIDE

1. Power Board

1-1. The whole flowchart which it follows in voltage output state



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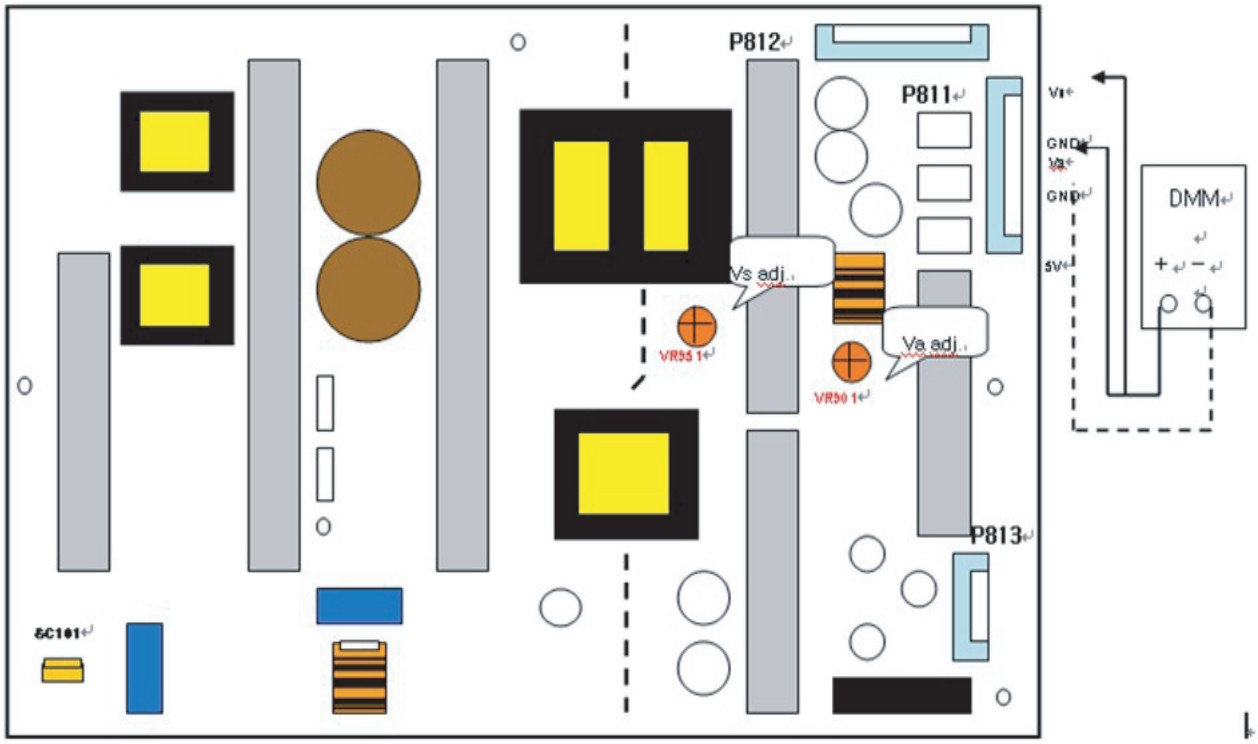
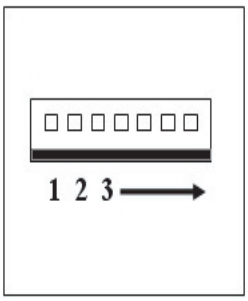
1-2. 42” Power Board Structure



PIN No	1	2	3	4	5	6	7	8	9	10
P811	V-S	V-S	NC	GND	GND	V-A	V-A	GND	M5V	M5V
P812	V-S	V-S	NC	GND	GND	V-A	V-A	GND	M5V	M5V



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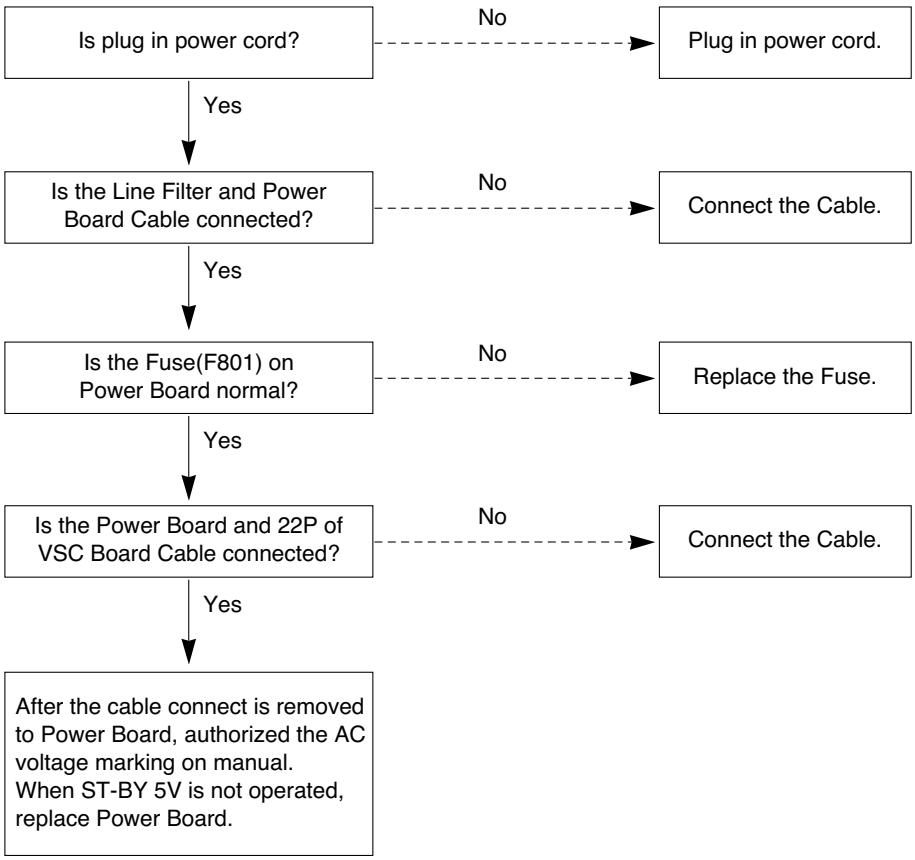
2. No Power

(1) Symptom

1) Doesn't minute discharge at module.
2) Non does not come in into the front LED.

(2) Check following



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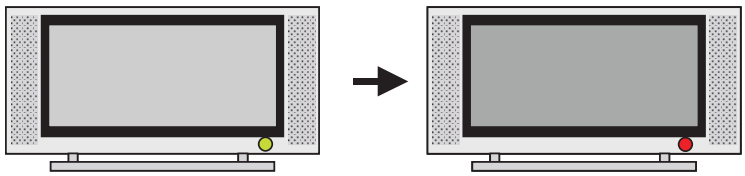
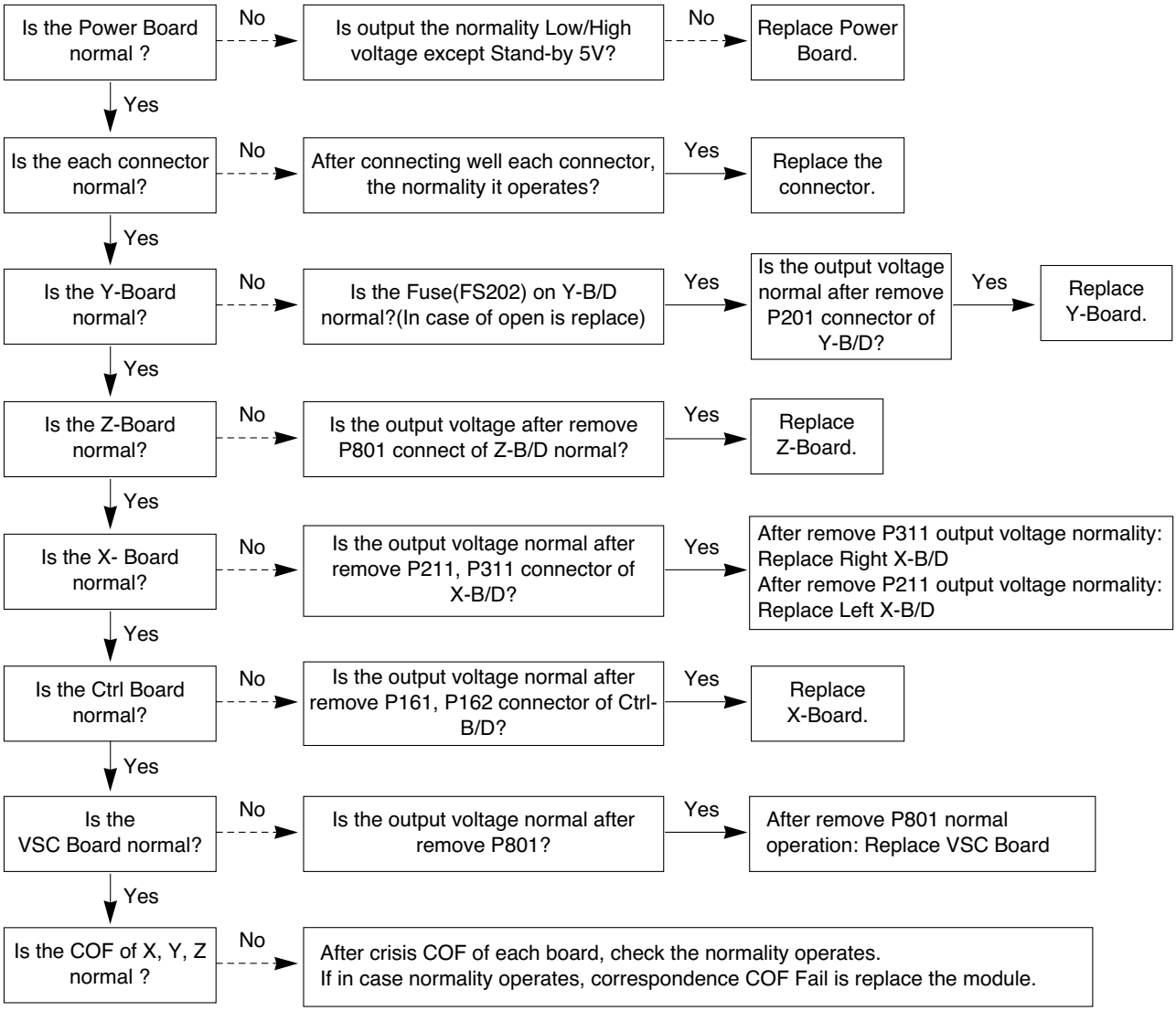
3. Protect Mode

(1) Symptom

1) After once shining, it does not discharge minutely from module.
2) The Rely falls.(The sound is audible “click”)
3) It is converted with the color where the front LED is red from green.



(2) Check following



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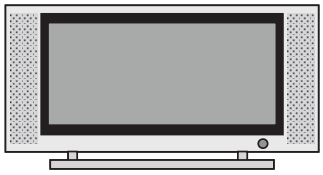
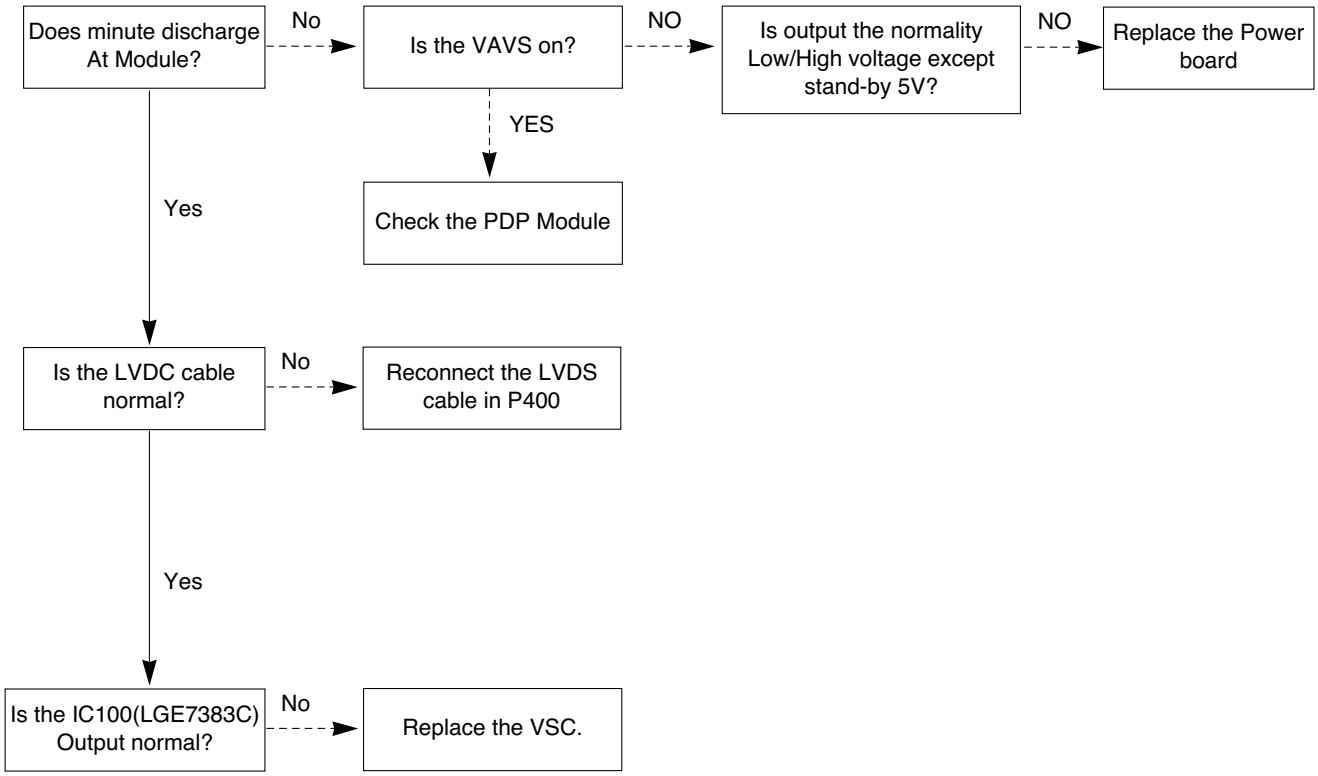
4. No Raster

(1) Symptom

1) No OSD and image occur at screen.
2) It maintains the condition where the front LED is green.



(2) Check following



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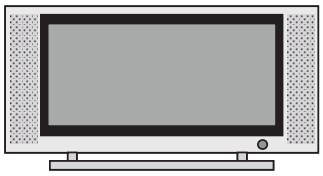
5. In case of occurring strange screen into specific mode

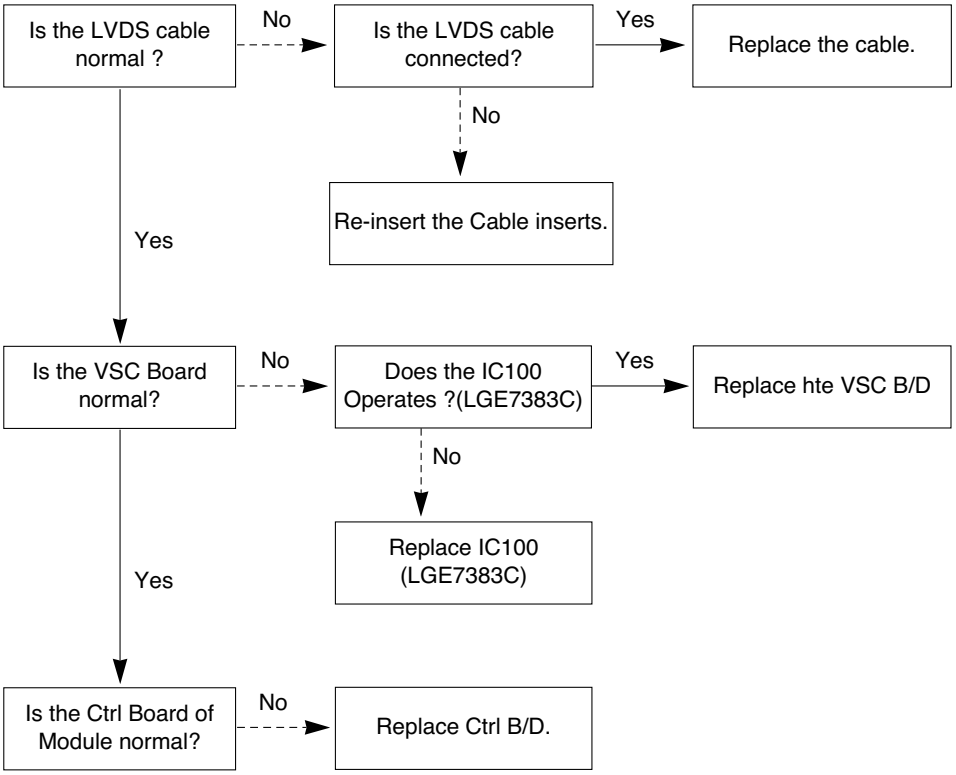
5-1. In case the OSD does not displayed

(1) Symptom

1) LED is green.
2) The minute discharged continuously becomes Accomplished from module.



(2) Check following



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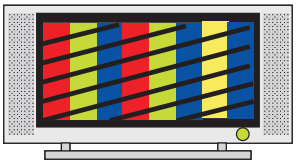
5-2. In case of does't display the screen into specific mode

(1) Symptom

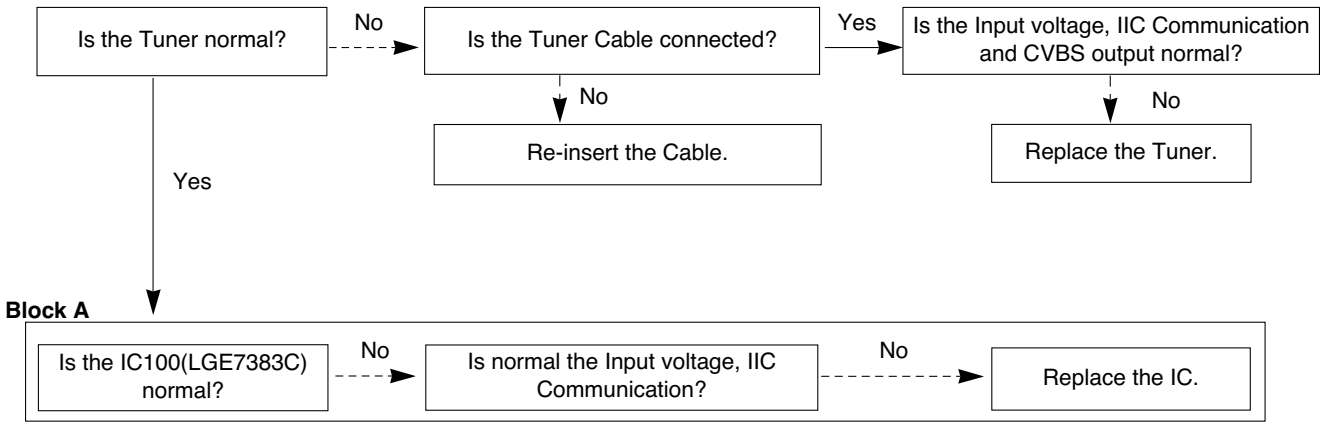
1) The screen does not become the display from specific input mode (RF, AV, Component, RGB, DVI).



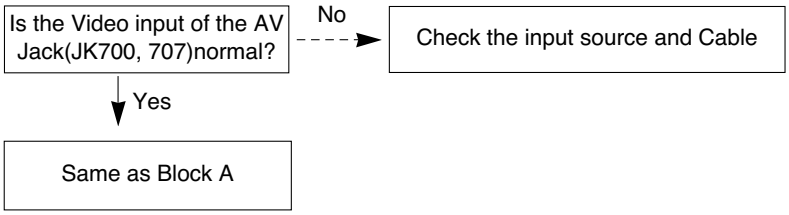
(2) Check following

1) Check the all input mode should become normality display.

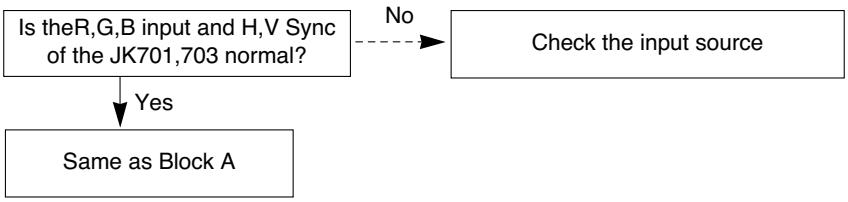
(3) In case of becomes unusual display from RF mode



(4) In the case of becomes unusual display from side S-video/AV mode



(5) In the case of becomes unusual display from Component, RGB mode



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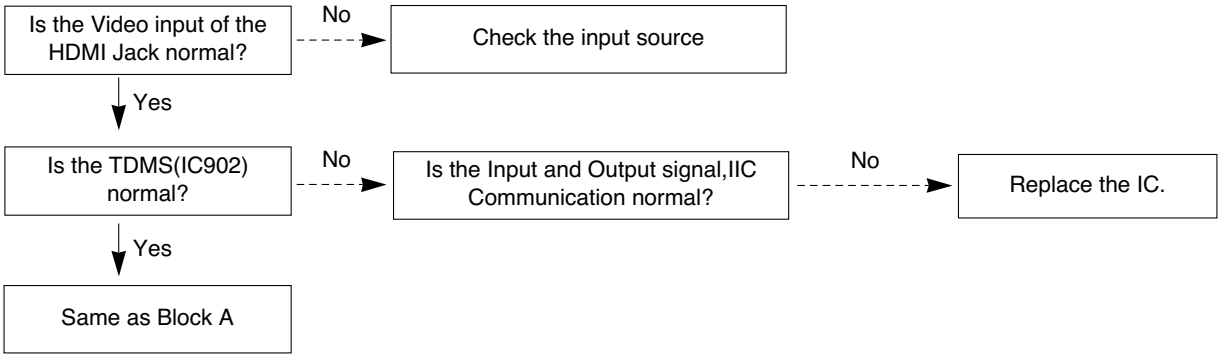
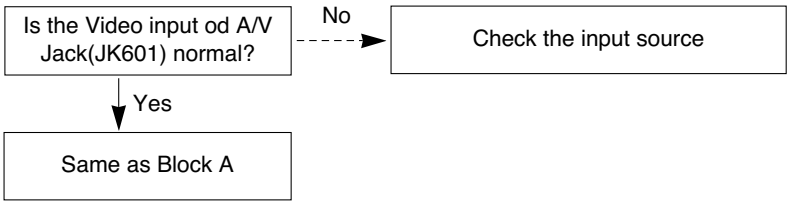
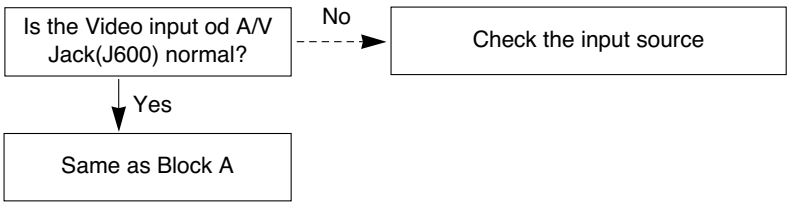
(6) In the case of becomes unusual display from HDMI mode



(7) In the case of becomes unusual display from SCART1 mode



(8) In the case of becomes unusual display from SCART2 mode



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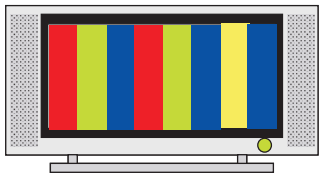
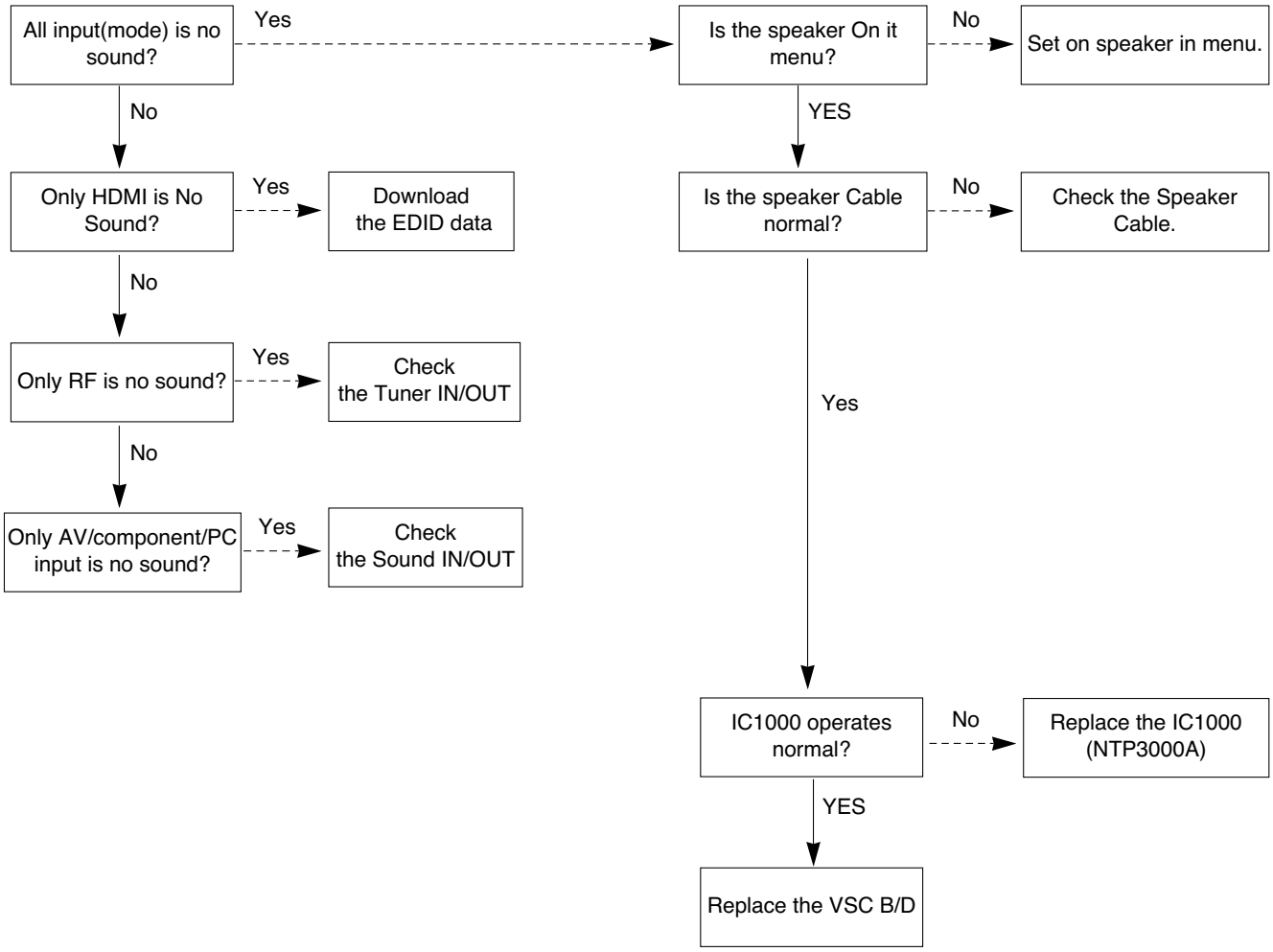
6. In case of no sound

(1) Symptom

1) LED is Green.
2) Screen display but sound is not output.



(2) Check following



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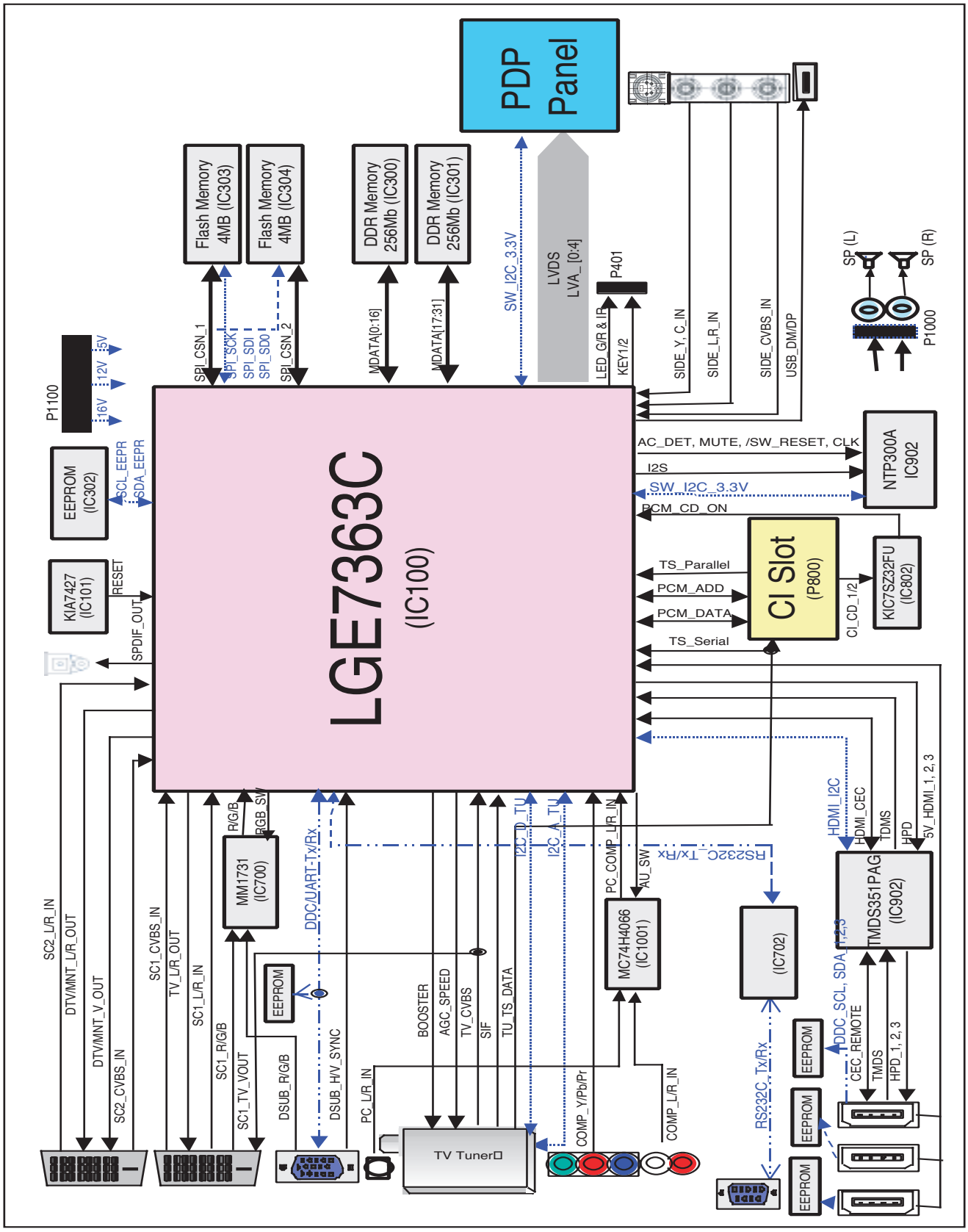
BLOCK DIAGRAM



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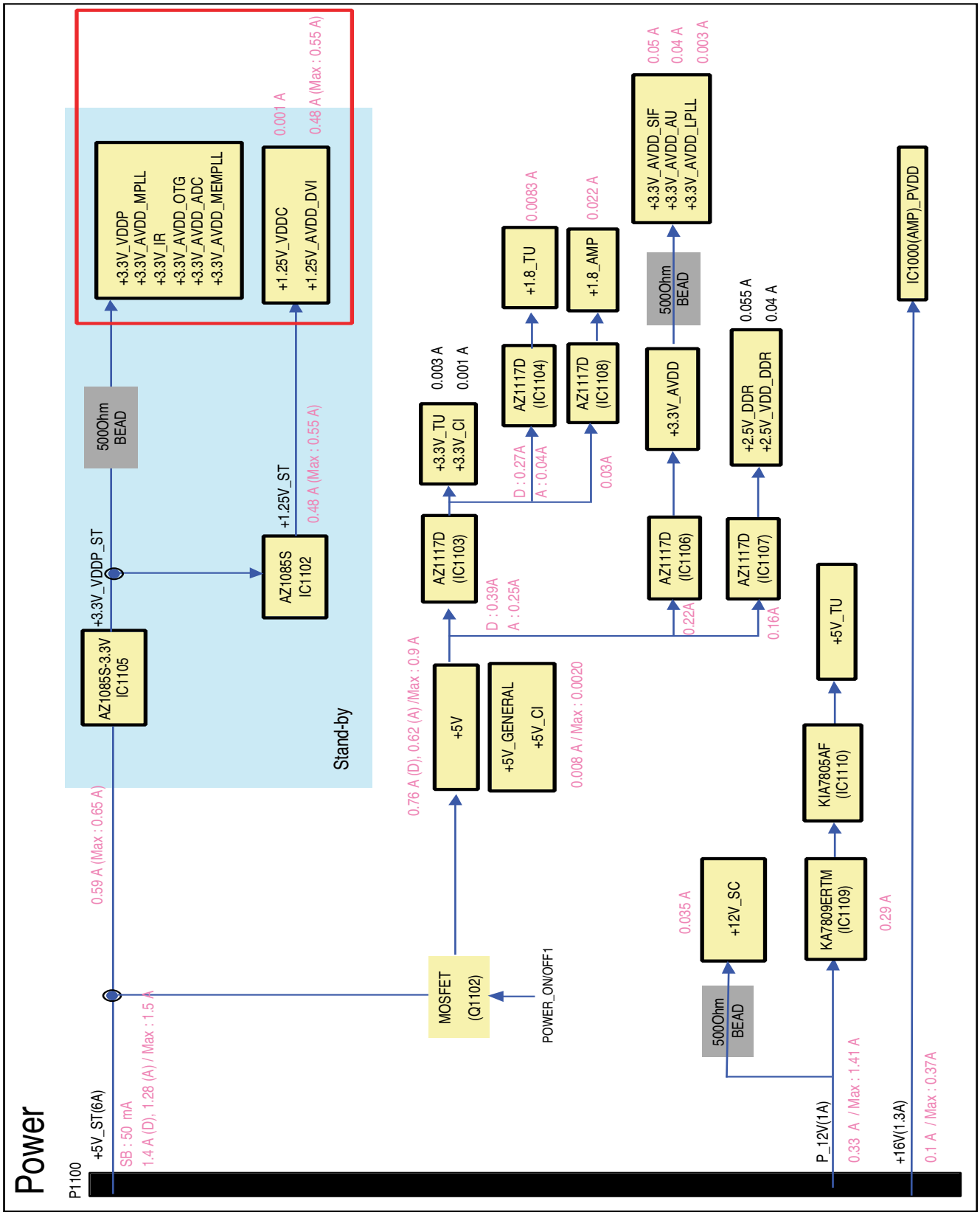

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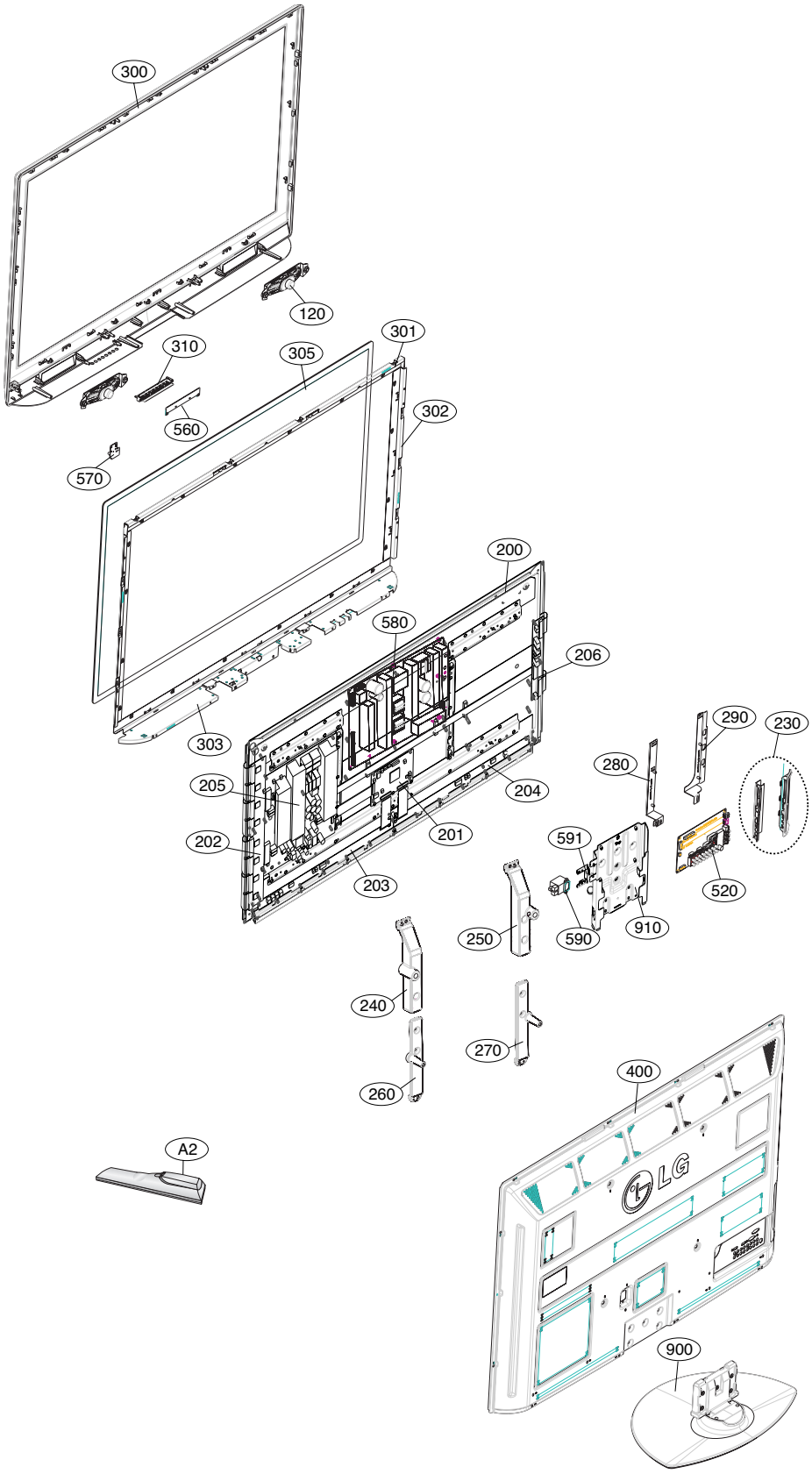
EXPLODED VIEW



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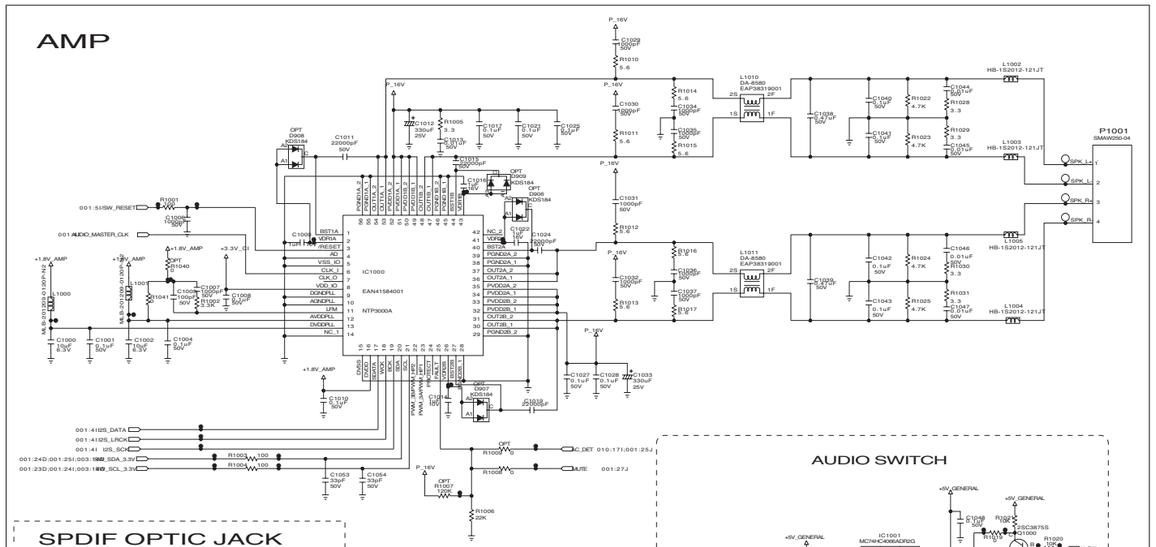
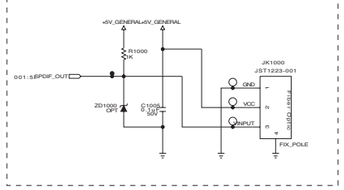
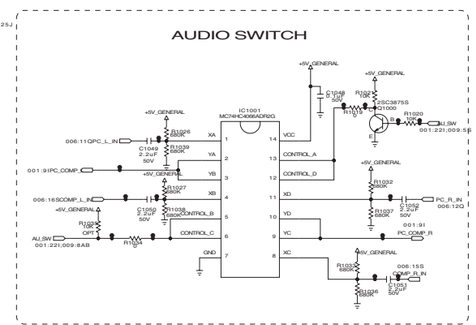
AMP



SPDIF OPTIC JACK



AUDIO SWITCH



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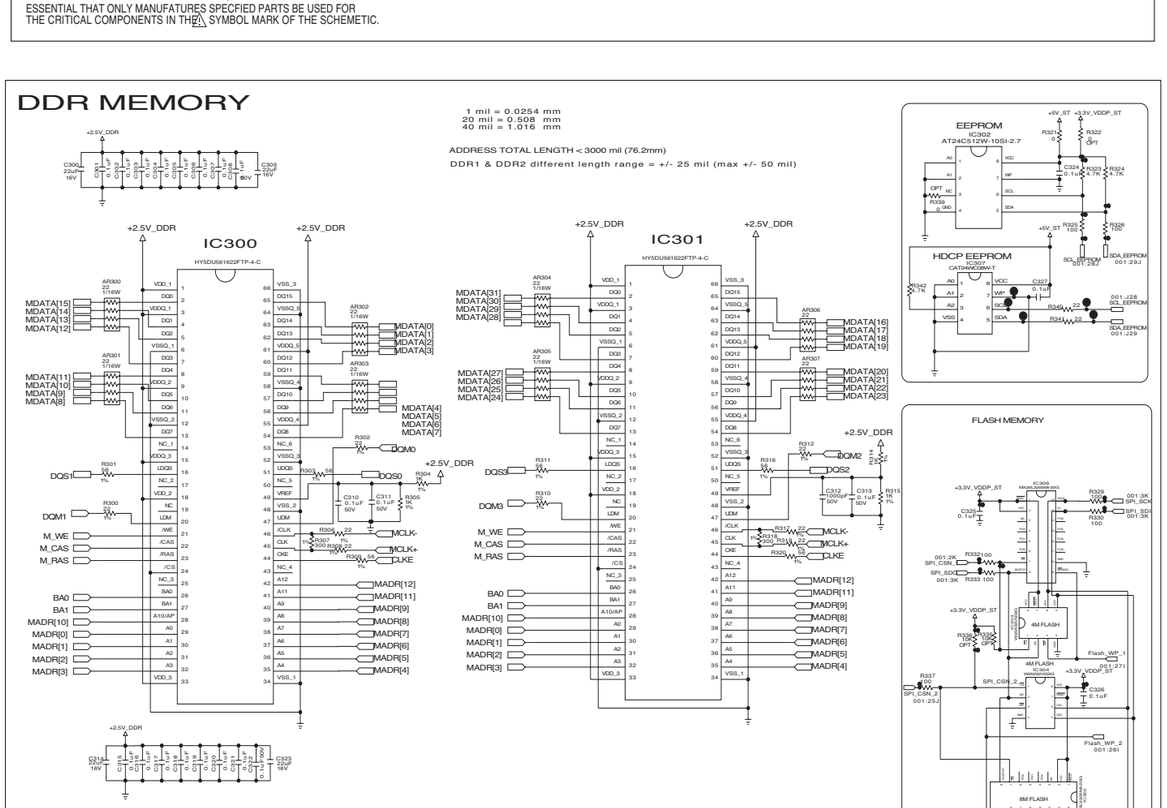
DDR MEMORY

1 mil = 0.0254 mm
20 mil = 0.508 mm
40 mil = 1.016 mm

ADDRESS TOTAL LENGTH < 3000 mil (76.2mm)

DDR1 & DDR2 different length range = +/- 25 mil (max +/- 50 mil)



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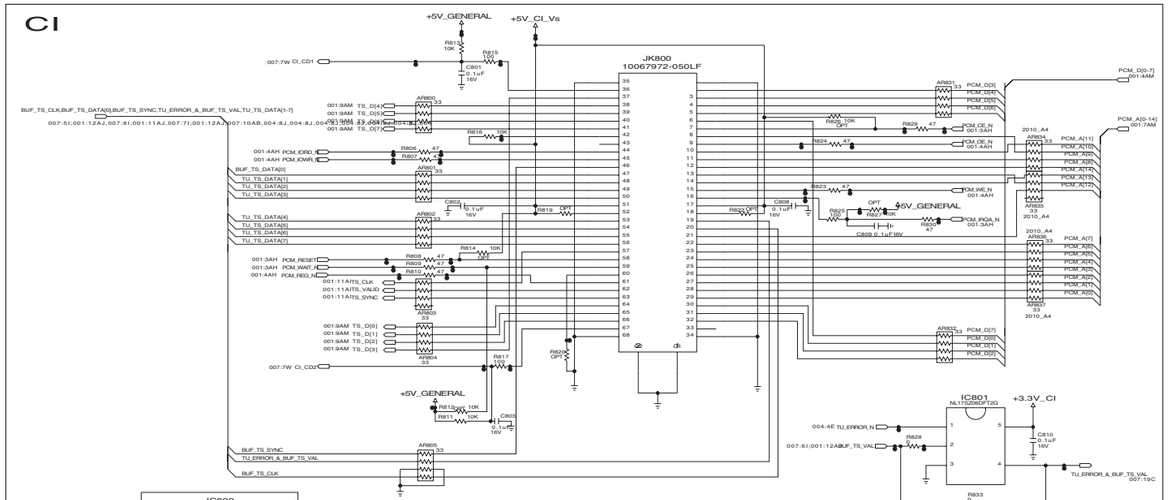
CI



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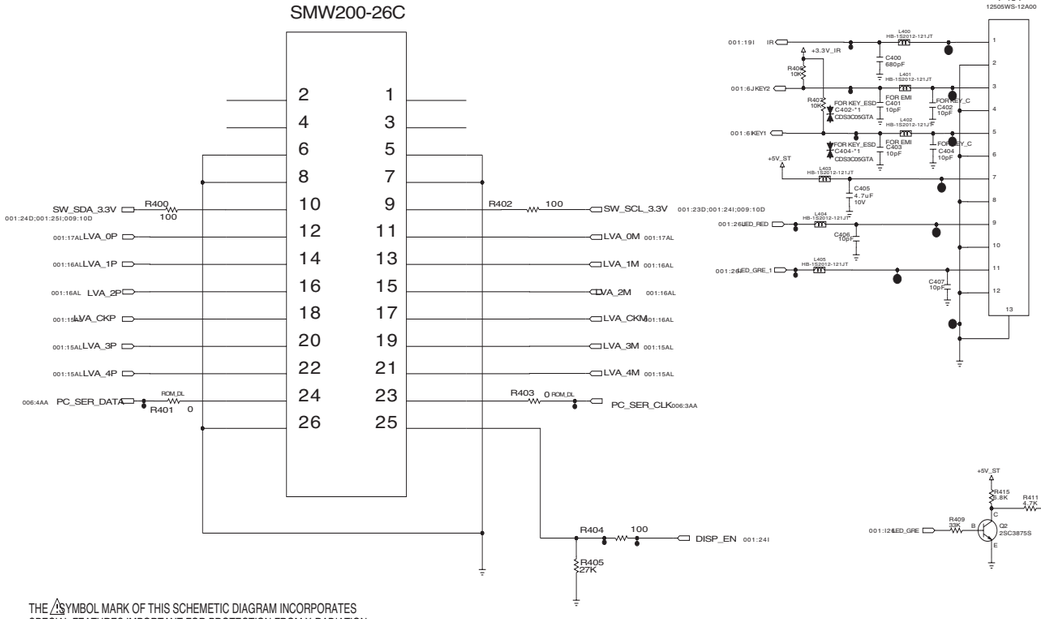
LGE Internal Use Only

Module

PANNEL WAFER

P400
SMW200-26C



IR/CONTROL

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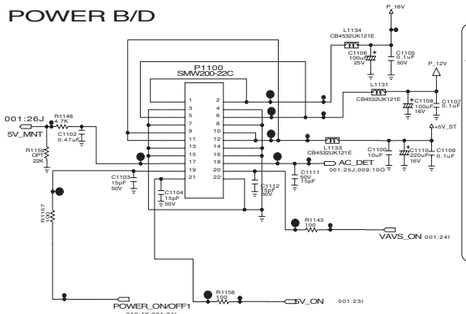
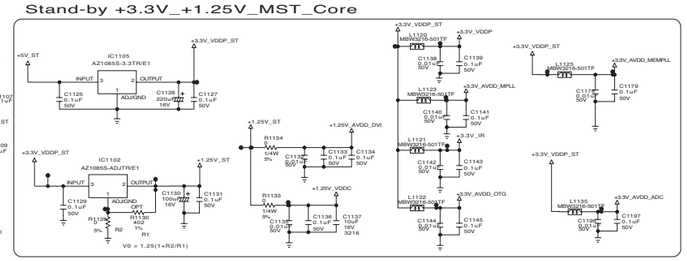
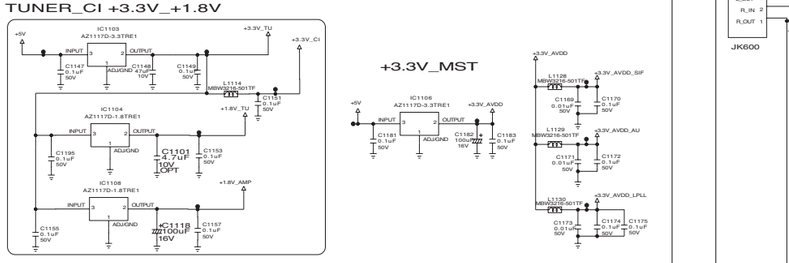
POWER B/D



Stand-by +3.3V_+1.25V_MST_Core

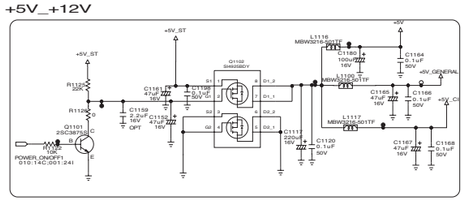


TUNER_CI +3.3V_+1.8V

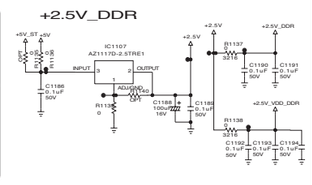


+3.3V_MST

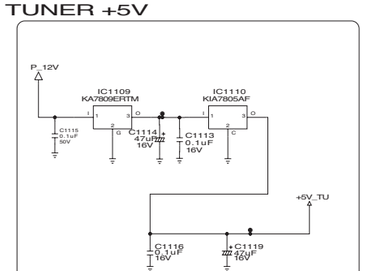
+5V_+12V



+2.5V_DDR



TUNER +5V



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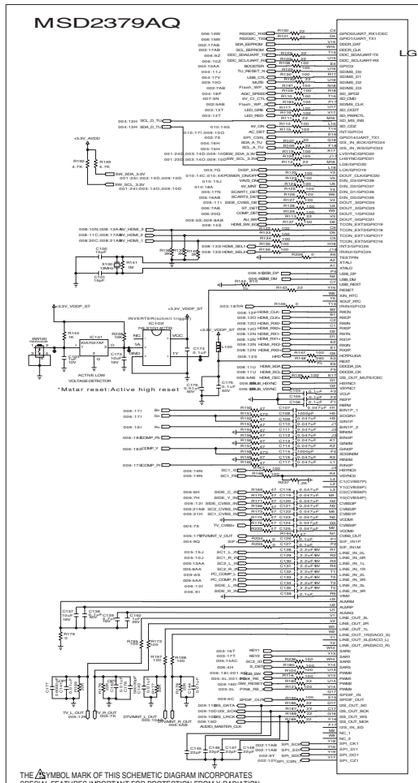
MSD2379AQ

IC100
LGE7363C-LF



IC100
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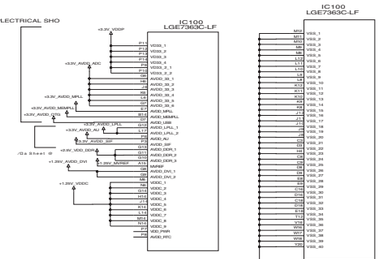

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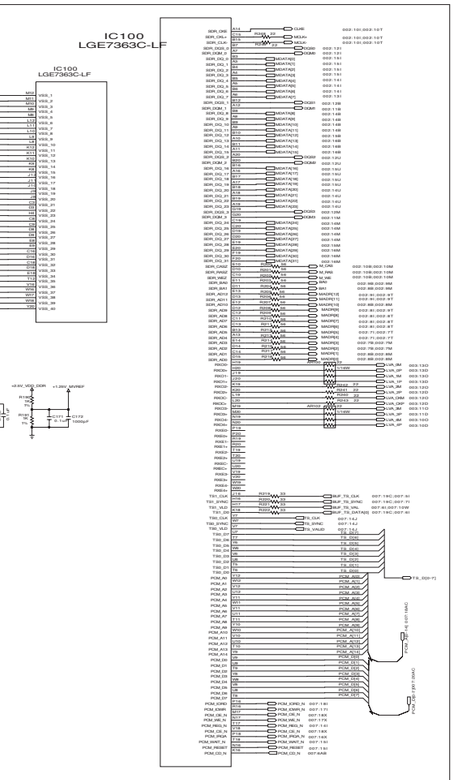

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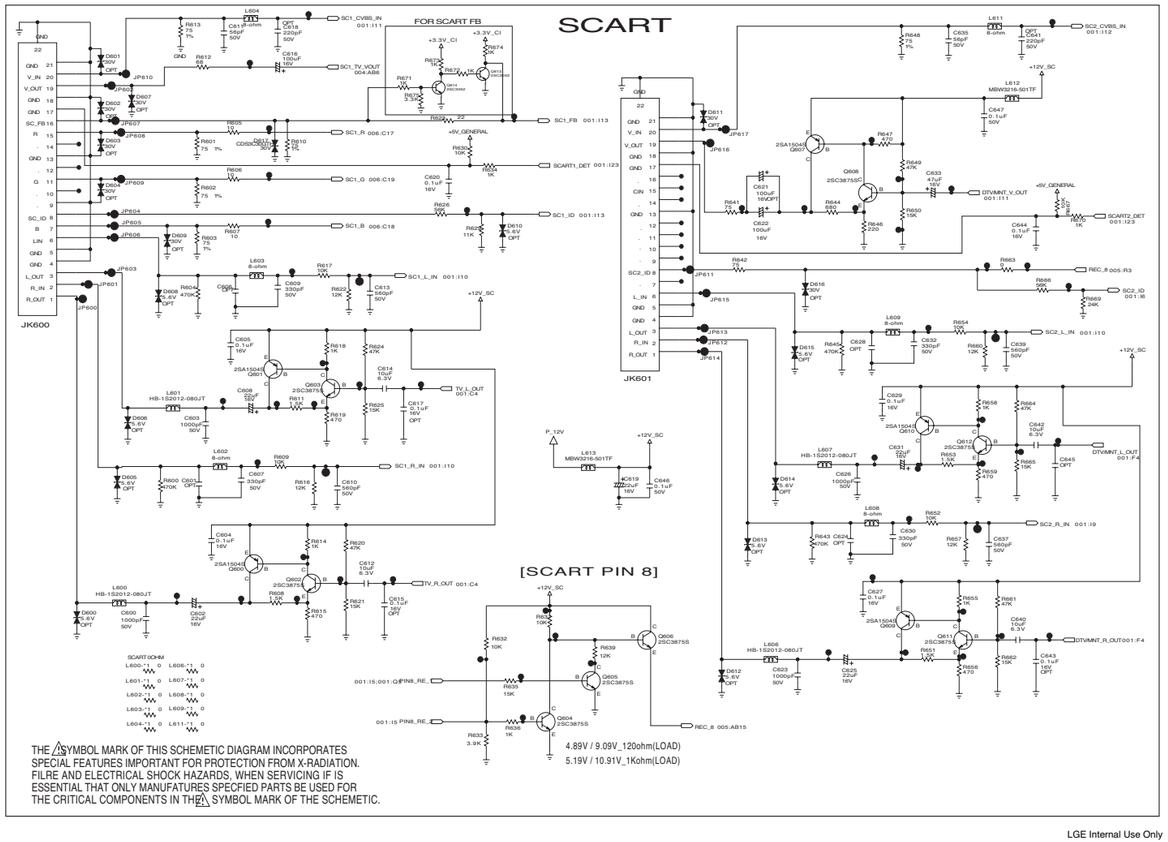
SCART



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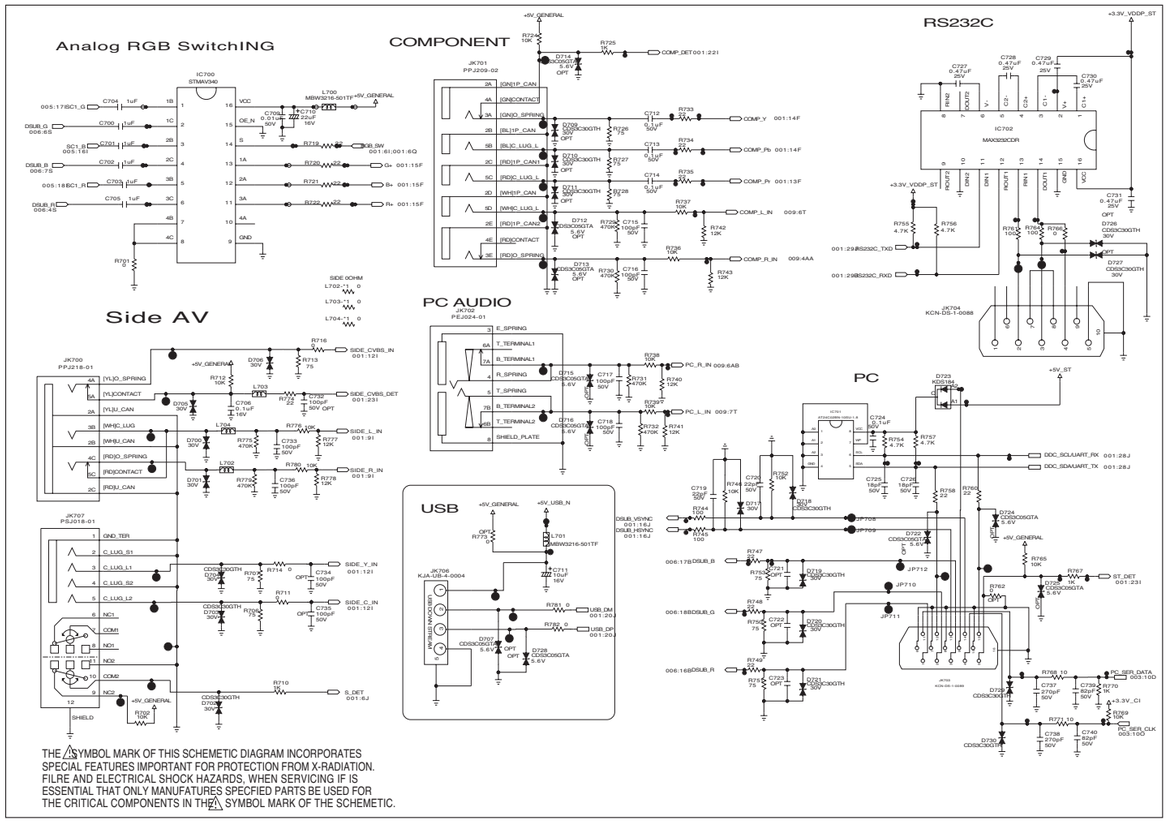
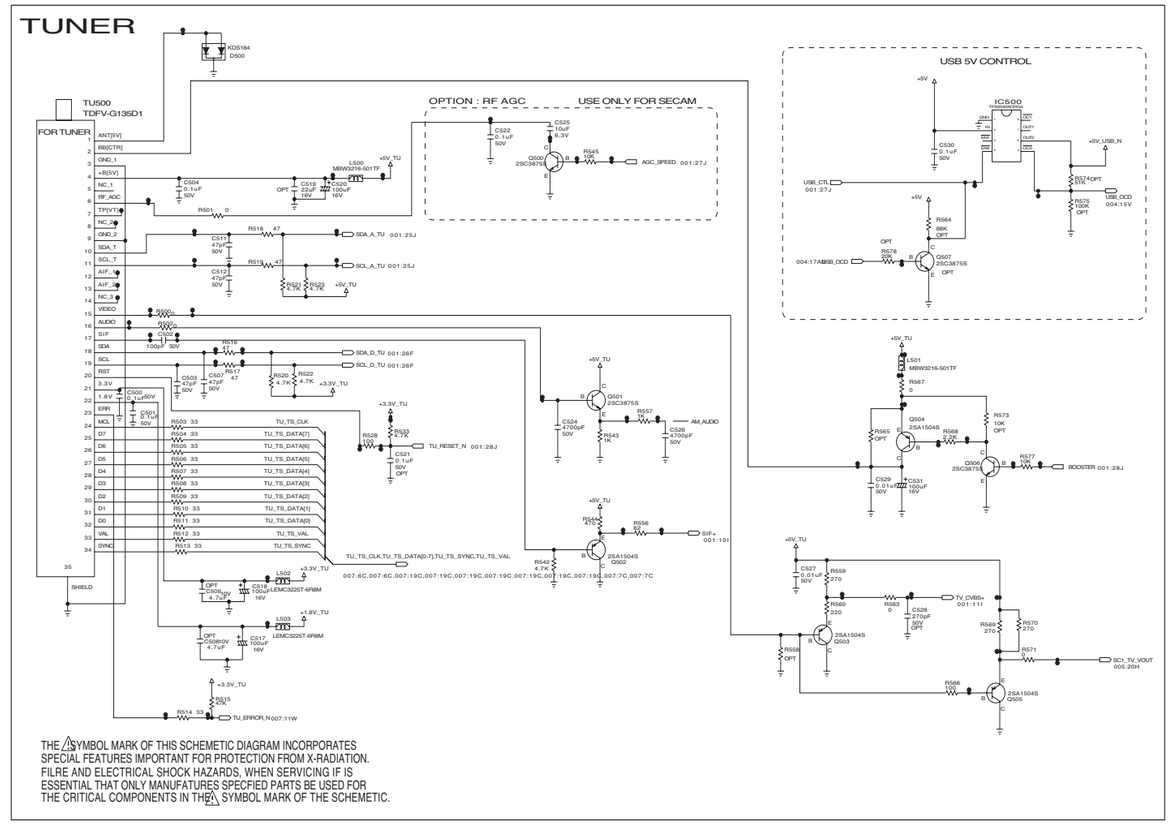
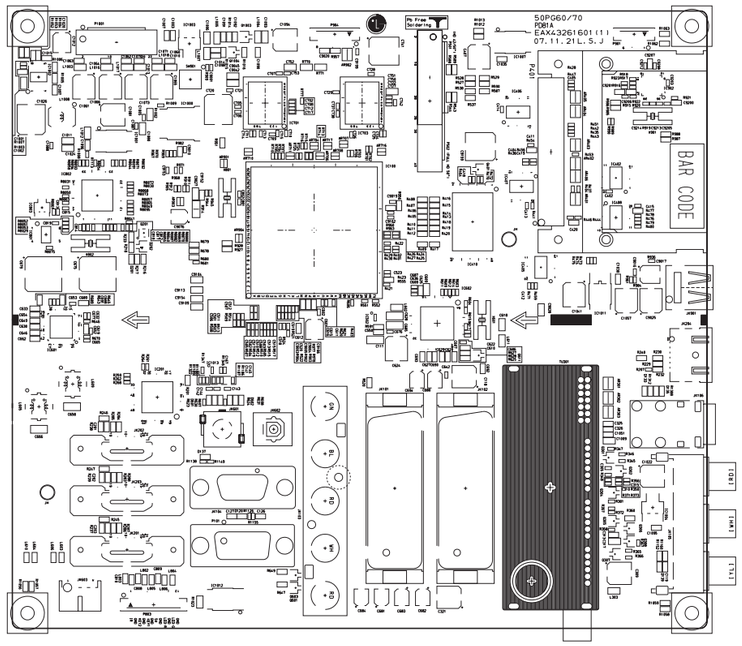


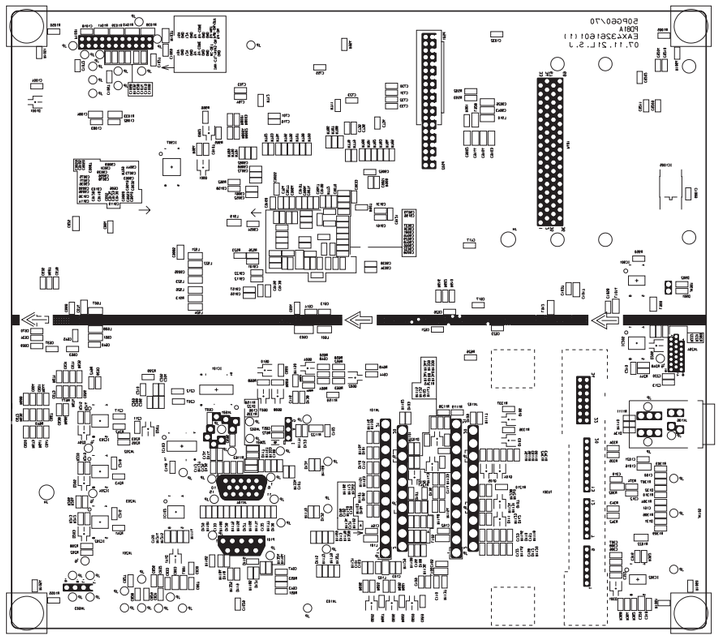


PRINTED CIRCUIT BOARD

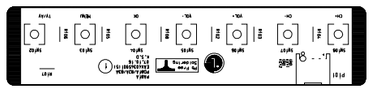
MAIN(TOP)



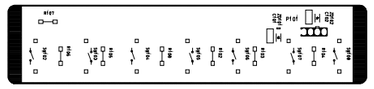
MAIN(BOTTOM)



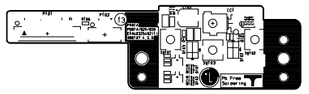
Control B/D(TOP)



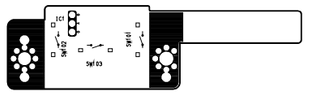
Control B/D(BOTTOM)



PREAMP B/D(TOP)



PREAMP B/D(BOTTOM)



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P/NO : MFL42222701

Apr., 2008
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